

CLAIMS

1. An image analyzing device comprising:  
storage section which stores image data obtained  
by processing reference chart data including a  
5 plurality of patterns for sampling each of  
characteristic quantities indicating characteristics of  
a defective image, by using a device targeted for  
checking;  
a characteristic quantity sampling section which  
10 samples a characteristic quantity of each of the  
plurality of patterns expressed in the image data  
stored in the storage section;  
a correlation table which associates each label  
for classifying defective image with at least one of  
15 the characteristic quantities corresponding to the  
label; and  
a label specifying section which specifies the  
label for a pattern in which the characteristic  
quantity is sampled by the characteristic quantity  
20 sampling section from among the plurality of patterns  
expressed in the image data by referring to the  
correlation table.

2. An image analyzing device according to  
claim 1, wherein the reference chart data is a print  
25 image, and the image data is electronic data obtained  
by reading the print image by an image scanner targeted  
for checking.

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3. An image analyzing device according to  
claim 1, wherein the reference chart data is electronic  
data, and the image data is electronic data obtained by  
further reading an image printed by a printer targeted  
5 for checking by using the electronic data, by an image  
scanner.

4. An image analyzing device according to  
claim 1, wherein the characteristic quantity sampling  
section applies mutually different processing to the  
10 mutually different patterns in order to sample mutually  
different characteristic quantities.

5. An image analyzing device according to  
claim 1, wherein, with respect to the reference chart  
data, a plurality of known image patterns are disposed  
15 in a mesh manner, and the characteristic quantity  
sampling section uses processing suitable to sample  
characteristic quantities for each mesh.

6. An image analyzing device according to  
claim 1, further comprising:

20 a list storage section which stores a reference  
chart characteristic list having recorded therein  
characteristics including respective pattern  
configurations of mutually different reference chart  
data; and

25 a selecting section which selects optimal  
reference chart data from the list storage section  
according to the characteristic quantity sampled by the

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characteristic quantity sampling section.

7. An image analyzing device according to  
claim 1, wherein the image analyzing device is provided  
in a personal computer.

5 8. An image analyzing device according to  
claim 1, further comprising:

an image scanner which reads a document image and  
provides image data corresponding to the document  
image, wherein the storage section stores read data  
10 obtained by reading an arbitrary sample using an image  
scanner;

a list storage section which stores a reference  
chart characteristic list having recorded therein  
characteristics including respective pattern  
15 configurations of mutually different reference chart  
data;

pattern analyzing section which analyzes  
characteristics including a pattern configuration of  
the read data stored by the storage section and adds  
20 characteristics including the analyzed pattern  
configuration to the reference chart characteristic  
list; and wherein

the arbitrary image sample and the read data are  
used as new reference chart data.

25 9. An image checking system comprising:

image analyzing section which analyzes the  
presence or absence of a defective image from image

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data obtained by making an electronic data of printed image outputted from a device targeted for checking, and makes classification for each phenomenon which appears on the defective image;

5 a cause estimating section which narrows a candidate of causes of a defect according to the phenomenon analyzed by the image analyzing section and other information; and

10 a display section which displays the phenomenon classified by the image analyzing section and the causes of the defect estimated by the cause estimating section.

15 10. An image checking system according to claim 9, wherein the image analyzing section comprises:

15 storage section for storing image data obtained by processing reference chart data including a plurality of patterns for sampling each of characteristic quantities indicating characteristics of a defective image, by using a device targeted for checking;

20 a characteristic quantity sampling section which samples a characteristic quantity of each of the plurality of patterns expressed in the image data stored in the storage section;

25 a correlation table which associates each label for classifying defective image with at least one of the characteristic quantities corresponding to the label; and

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5 a label specifying section which specifies the label for a pattern in which the characteristic quantity is sampled by the characteristic quantity sampling section from among the plurality of patterns expressed in the image data by referring to the correlation table.

10 11. An image checking system according to claim 9, wherein the other information is an internal parameter of a device targeted for checking.

12. An image checking system according to claim 9, wherein the other information is an output value of an internal sensor of a device targeted for checking.

13. An image checking system according to claim 9, wherein the other information is input information from 15 a operator.

14. An image checking system according to claim 9, wherein the other information is information on past checking results.

15. An image checking system according to claim 9, 20 further comprising a communication section which transmits to the outside the phenomenon classified by the image analyzing section and the causes of defect estimated by the cause estimating section.

16. An image checking system according to claim 9, 25 further comprising:

a scanner section which reads a document image and provides document image data corresponding to the

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document image; and

a printer section which forms an image

corresponding to the image data provided from the image  
scanner,

5 wherein the image data is the document image data  
provided from the scanner section.

17. An image checking system according to claim 9,  
further comprising:

10 a scanner section which reads a document image and  
provides document image data corresponding to the  
document image; and

a printer section which forms an image  
corresponding to the image data provided from the image  
scanner,

15 wherein the image data is document image data  
obtained by further reading the image formed by the  
printer section based on known reference data produced  
as electronic data, by use of the scanner section.

18. An image checking system according to claim 9,  
20 wherein the image checking system is provided in a  
personal computer.

19. An image checking system according to claim 9,  
wherein the image checking system is provided in a  
network controller connected to the device targeted for  
25 checking via network.

20. An image checking system according to claim 9,  
wherein the image analyzing section is provided in a

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network controller connected to the device targeted for checking via network, and the cause estimating section is provided in a computer system connected to the network controller via communication network.

5 21. An image checking system according to claim 9, wherein the image checking system is provided in a personal computer connected to the device targeted for checking via LAN.